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SAFE USE OF CAPILLARY BLOOD SAMPLING DEVICES*

Health care workers should be aware of a potential risk of hepatitis B transmission associated with improper use of spring-loaded lancet devices in obtaining capillary blood samples. While the Department of Health has not received reports of cases of hepatitis B or other blood-borne diseases associated with misuse of such devices, recent reports in the medical literature underscore the importance of avoiding cross contamination when using these units (1-3).

One such report described an outbreak of 16 cases of hepatitis B associated with improper use of a spring-loaded lancet. Investigation revealed that health care personnel were replacing the hemolance but not the platform after each use, resulting in patient exposure to the previous patient's blood (1).

When used correctly, spring-loaded lancet devices are effective and safe. Capillary blood samples are obtained by finger or heel sticks using hand-held single-use lancets or automatic spring-loaded devices. Such devices are in widespread use in hospitals, clinics and private physician offices. Spring-loaded devices typically have two disposable parts: the lancet which is used to puncture the skin, and the platform or endcap which is used to control the depth of the puncture. Health care workers are generally aware of the necessity to replace the lancet after each use, but may fail to replace the platform or endcap, which may become contaminated with the patient's blood.

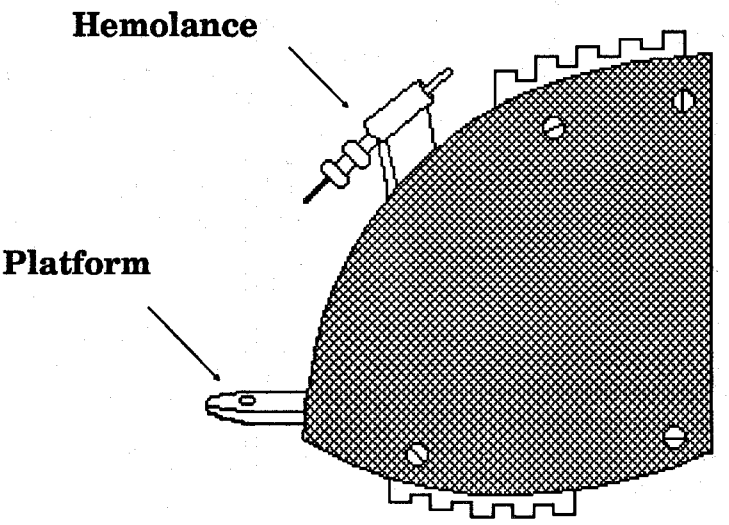


Figure 1. *Schematic diagram of a typical spring-loaded capillary blood sampling device.*

Health care workers using spring-loaded lancets are advised to:

- Replace the lancet and the platform or endcap after each use.
- Always order the same number of platforms (endcaps) and lancets when reordering.
- Dispose of both lancets and platforms in an appropriate sharps container.
- Not use spring-loaded lancets that do not have replaceable platforms.

These recommendations should be shared with appropriate staff. Should you become aware of hepatitis B virus transmission in association with such capillary blood sampling units or any medical device, please immediately report the circumstances to your local health department or the Office of Epidemiology at (804) 786-6261.

In This Issue...

References

1. Douvin C, Simon D, et al. An outbreak of hepatitis B in an endocrinology unit traced to a capillary blood sampling device. N Engl J Med 1990;322:57-58.

2. Drinka P, Spring-loaded lancets. N Engl J Med 1988;321:1762.

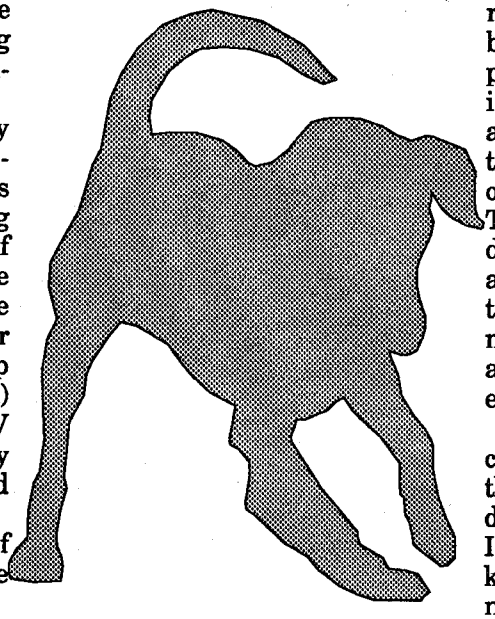
3. Centers for Disease Control. Nosocomial transmission of hepatitis B virus associated with a spring-loaded fingerstick device—California. MMWR 1990;39:610-611.

** Reprinted (with minor adaptation) from: State of New York, Department of Health, Memorandum Series 90-22, cosigned by the Division of Epidemiology, Office of Public Health, Center for Community Health, Office of Health Systems Management, and the Wadsworth Center for Laboratories and Research.*

RABIES POST-EXPOSURE PROPHYLAXIS REMINDERS*

If you have any questions about the appropriateness of, or procedure for, administering rabies post-exposure prophylaxis, please call your local health department. Human rabies post-exposure treatment is required by law to be reported.

If the individual to be treated has never received any rabies biologics, both human rabies immune globulin (HRIG) and human diploid cell vaccine (HDCV) should be administered using the following schedule:



Day 0 (first day of treatment): 20 international units (IU) of HRIG per kg of body weight (if possible infiltrate one half around the wound, administer the remainder deep in the gluteal area) **and** 1 ml of HDCV intramuscularly (IM) in the deltoid region.

Day 3: 1 ml of HDCV IM in the deltoid region.

Day 7: 1 ml of HDCV IM in the deltoid region.

Day 14: 1 ml of HDCV IM in the deltoid region.

Day 28: 1 ml of HDCV IM in the deltoid region.

An alternate vaccine site for small children is in the lateral aspect of the thigh (IM).

HDCV activity may be compromised if it is administered in the gluteal area or in the same site as HRIG.

If the individual to be treated has a history of vaccination with HDCV or an adequate post-vaccination titer from some other rabies vaccine, administer 1 ml of HDCV IM in the deltoid region on days 0 and 3. No HRIG is recommended and its administration may delay the anamnestic response to vaccine.

Measurement of post-treatment titers is only necessary to evaluate individuals who may be immunocompromised.

Most third party payers have reimbursed for rabies post-exposure prophylaxis when it is appropriate and referred to as treatment instead of immunization. The local health department will assist with patients who lack medical insurance and are income-eligible.

The HDCV licensed for use in this country is produced by Merieux Institute and marketed by Connaught Laboratories (1-800-822-2463).

HRIG is available from either Connaught Laboratories at the phone number listed above or Cutter Biologicals (1-800-288-8370).

In an emergency, HDCV or HRIG can be shipped overnight by the above companies. It may also be available from a hospital emergency room, your local health department, or can be purchased from the state pharmacy in Richmond (804-786-3596).

** Submitted by Suzanne R. Jenkins, VDM, MPH, Zoonotic Disease Control, VDH*

Season's Greetings from the Office of Epidemiology!

FDA Approves Haemophilus b Conjugate Vaccine for Infants*

The Food and Drug Administration has approved the Haemophilus b Conjugate Vaccine (Diphtheria CRM_{197} Protein Conjugate) manufactured by Praxis Biologics, Inc., and distributed as HibTITER™ by Lederle Laboratories (Pearl River, New York) for use in infants in a three-dose immunization series at 2, 4, and 6 months of age. Previously unvaccinated infants 7-11 months of age should receive two doses 2 months apart. Previously unvaccinated children 12-14 months of age should receive one dose; a booster dose after 15 months of age is recommended for these children. Previously unvaccinated children 15-60 months of age should receive a single dose and do not require a booster.

In the United States, *Haemophilus influenzae* type b is the major cause of bacterial meningitis in children years of age, with the peak incidence in children year of age (1). The principal efficacy trial for this vaccine was conducted in approximately 60,000 infants in the Northern California Kaiser Permanente Health Plan (2); approximately half of those children received the vaccine. Twelve cases of *H. influenzae* type b invasive disease occurred in unvaccinated children, compared with no cases in fully vaccinated children, indicating an efficacy of 100%, with the lower limit of the 95% confidence interval equal to 68%. The Immunization Practices Advisory Committee (ACIP) is planning to issue a complete statement.

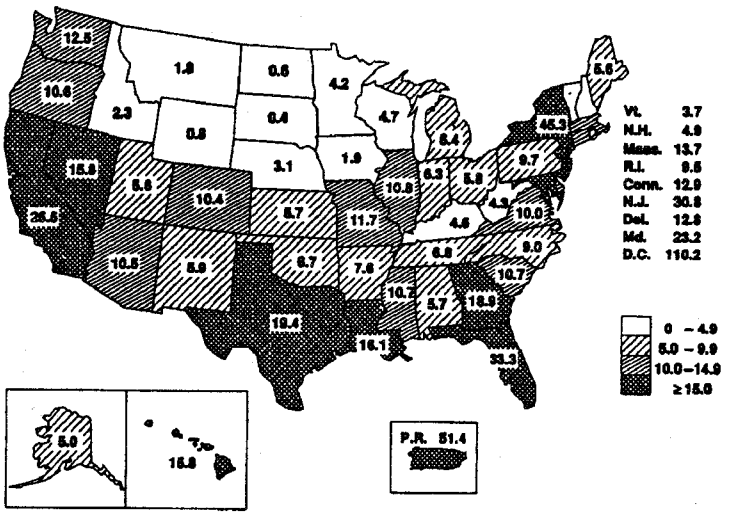
References

1. Schlech WF, Ward JI, Band JD, et al. Bacterial meningitis in the United States, 1978 through 1981: the National Bacterial Meningitis Surveillance Study. JAMA 1985;253:1749-54.

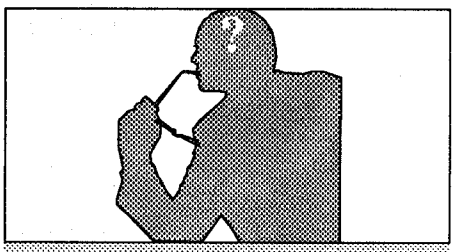
2. Black SB, Shinefield HR, Hiatt RA, et al. Efficacy of HbOC conjugate *Haemophilus influenzae* type b vaccine in a study population of 48,000 infants (Abstract). In: Program and abstracts of the 30th Interscience Conference on Antimicrobial Agents and Chemotherapy. Washington, DC: American Society for Microbiology, 1990.

** Reprinted from MMWR 1990;39:698-699.*

AIDS cases per 100,000 population——United States, October 1989-September 1990



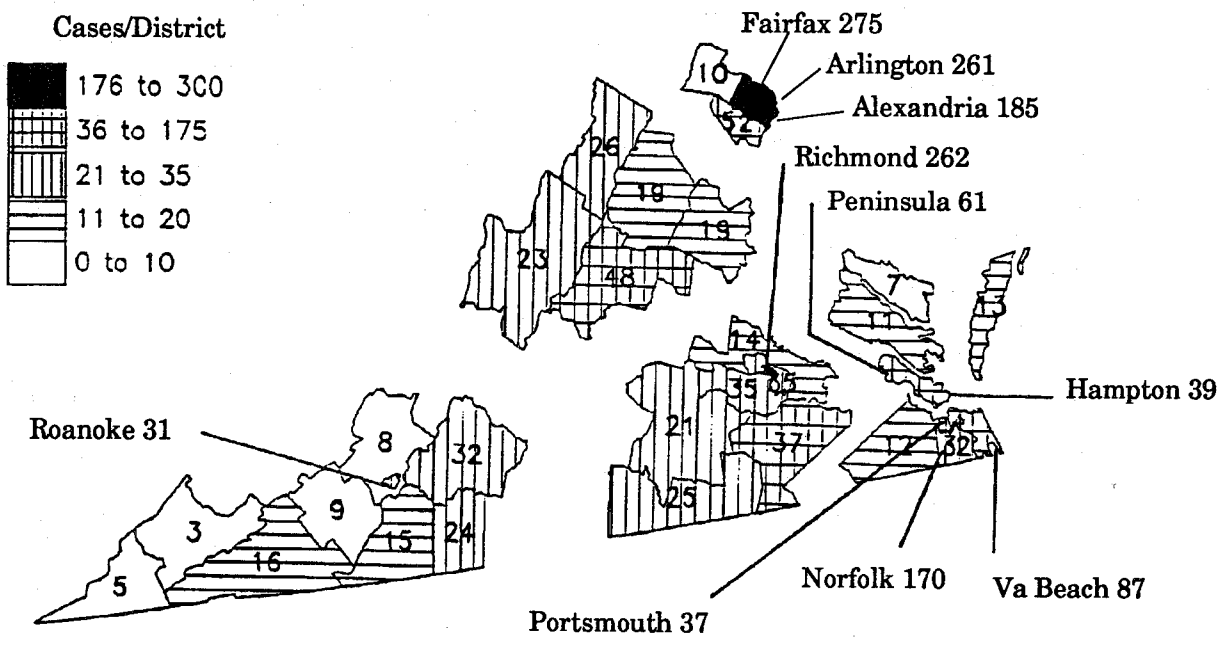
Source: MMWR 1990;39:771



CONFUSED?

The statement in the September issue of the *Bulletin* regarding **annual** rabies vaccination of dogs and cats was in an article reprinted from the Texas Preventable Disease News and applies to Texas where the influx of Mexican dog rabies creates a unique situation. Virginia still follows the recommendation of the Compendium of Animal Rabies Control; the use of **triennial** rabies vaccines constitutes the most effective method of increasing the proportion of immunized dogs and cats. All puppies and kittens should be vaccinated between three and four months of age and again one year later before beginning the triennial schedule. If the initial rabies vaccination is administered to an older animal, the second vaccination should still be administered a year later.

AIDS Cases Reported in Virginia, 1982 to November 1, 1990



Source: Va AIDS Surveillance Program

Cases of Selected Notifiable Diseases, Virginia, October 1 through October 31, 1990.

Disease	Total Cases Reported This Month						Total Cases Reported to Date in Virginia		
		Regions							
	State	NW	N	SW	C	E	This Yr	Last Yr	5 Yr Avg
AIDS	70	2	22	8	15	23	530	325	209
Campylobacter	48	8	9	10	15	6	489	594	563
Gonorrhea	1719	-	-	-	-	-	14853	13425	13969
Hepatitis A	30	1	6	12	7	4	261	268	208
Hepatitis B	23	0	6	7	1	9	210	262	357
Hepatitis NANB	3	1	0	0	2	0	36	63	61
Influenza	0	0	0	0	0	0	772	1944	2134
Kawasaki Syndrome	6	1	1	0	0	4	24	22	21
Legionellosis	2	0	1	0	0	1	13	9	13
Lyme Disease	12	2	1	1	0	8	112	43	19
Measles	0	0	0	0	0	0	86	22	62
Meningitis, Aseptic	43	6	18	4	10	5	276	335	255
Meningitis, Bacterial*	9	0	3	2	3	1	118	150	169
Meningococcal Infections	4	0	1	2	0	1	46	55	55
Mumps	2	0	1	1	0	0	99	111	80
Pertussis	1	0	0	1	0	0	18	33	31
Rabies in Animals	18	5	4	2	6	1	171	219	234
Reye Syndrome	0	0	0	0	0	0	1	2	1
Rocky Mountain Spotted Fever	3	1	0	0	2	0	22	17	26
Rubella	0	0	0	0	0	0	1	0	3
Salmonellosis	170	14	54	30	42	30	1190	1251	1397
Shigellosis	14	3	9	2	0	0	139	365	219
Syphilis (Primary & Secondary)	95	11	13	7	42	22	754	474	332
Tuberculosis	37	5	11	3	3	15	320	302	330

Localities Reporting Animal Rabies: Albemarle 1 raccoon; Amelia 1 raccoon; Botetourt 1 raccoon; Chesterfield 1 cat; Fauquier 1 raccoon; Fluvanna 1 cat; Hopewell 2 raccoons; James City 1 skunk; Loudoun 2 raccoons, 1 skunk; Montgomery 1 fox; Orange 1 raccoon; Prince William 1 bat; Rockbridge 1 bat; Surry 1 raccoon; Sussex 1 raccoon.

Occupational Illnesses: Asbestosis 5; Carpal Tunnel Syndrome 29; Coal Workers' Pneumoconiosis 40; Loss of Hearing 15; Mesothelioma 1; Repetitive Motion Disorder 5; Silicosis 1.

* Other than meningococcal.

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